

Appendix A – Aberdeen Proving Ground Interview Summaries

List of Interviewed Personnel

<u>Contact</u>	<u>Title</u>	<u>Section</u>	<u>Phone</u>
Gregg Kuester	CADD/GIS Mgr.	DPW	1-(410)-306-1145
Dennis Overbay	Facility Manager	DPW	1-(410)-306-1125
Patrick Malone	Facility Manager	DPW	1-(410)-306-1130
James Bransions	Facility Manager	DPW	1-(410)-306-1132
Thomas Vincenti	Facility Manager	DPW	1-(410)-306-1131
Robert Weaver	Chief, Maint. Branch	DPW	1-(410)-278-3604
Eugene Worthington	Chief, Maint. Branch	DPW	1-(410)-278-3604
Lisa Weismiller	Real Estate Officer	DPW	1-(410)-278-4009
Jacqueline Broome	Computer Specialist	DSHE	
Amy L. Dean	Env. Eng. - Air Quality	DSHE	1-(410)-278-2138
Michael Johnson	Env. Eng. - Solid Waste	DSHE	1-(410)-278-9949
Keisha R. Harris	Env. Eng. - Wastewater	DSHE	1-(410)-278-4529
Dan Debonis	Env. Eng. - Tanks	DSHE	1-(410)-278-4529
Andrew Murphy	Env. Eng. - Haz. Waste	DSHE	1-(410)-278-9024
Roger Calvert	Env. Eng. - PCBs	DSHE	1-(410)-671-2754
John Hayden	Env. Eng. - Asb./Lead	DSHE	
Donald Green	Project Officer	IRP	
Naren Desai	Project Officer	IRP	1-(410)-671-4569
Paul Miller	Geotech. Lab Mgr	IRP	1-(410)-634-3747
Mishra Turner	Env. Eng. - Water	AEC	1-(410)-278-????
Lawrence Webber	Env. Eng. - Air	AEC	
Robert Shakeshaft	Env. Eng. - Haz. Waste	AEC	

General Systems - Buildings/Real Estate

(Directorate of Public Works)

Contact: Mr. Gregg Kuester
CADD/GIS Manager
APG - DPW
Ph: (410) 306-1145

Date of Interview: Wednesday, June 25, 1997

Q What type of operating platform(s) support your current CADD/GIS applications technology?

A *The current technology is evolving from a UNIX platform to a Windows NT platform. The upgrade at present is approximately 80% complete.*

Q What type of network operating system(s) is currently being used to facilitate the computers/CADD workstations at this facility?

A *Novell network software and microsoft networking software are the principle networking systems being used. The CADD/GIS manager expressed a concern over the issue of security with their system. Currently there is no security, however plans to incorporate a "firewall" into the system has been proposed.*

Q What kind(s) of computers are currently being used at this site for CADD/GIS, in terms of manufacturer's name and type?

A *Currently the CADD and GIS applications are utilizing Intergraph TD- 1's and TD-2's, the newer TD-300's are progressively being phased into place. Most of the desktop applications are being supported by Gateway and Dell computers at the 486 and Pentium levels.*

Q What is the CPU capacity of the computers that are currently being used at this installation for CADD/GIS?

A *Capacity: Intergraph TD-1 - 400-500 mg., 66 MHZ.
Capacity: Intergraph TD-2 - 1gb., 90 MHZ.
Capacity: Intergraph TD-300 - 1.2 gb., 200 MHZ.
Capacity: Pentium - 3.2 gb., 266 MHZ.*

The Intergraph TD models are being used for CADD/GIS while the Gateways and Dells are used for most of the standard desktop applications.

Q Do the computers at this facility have the capability to access the Internet?

A *Yes, all of the CADD/GIS and desktop application computers have the capability to support internet access. However, not all of the PC's currently have connectivity access to the internet.*

Q How is it decided what type of hardware/software is purchased and when?

A *Essentially the computer hardware and software purchases are based upon criteria presented by an in-house GIS implementation plan. The plan strategically evaluates installation needs and requirements based upon user defined criteria set forth by participating parties.*

Q What type of procedures and or processes are currently being used at this site to maintain a valid electronic file backup, briefly describe?

A *Since all GIS and CADD workstations are on a network system, there is an automated tape backup procedure that is in effect. Desktop computers not on a network are backed up by individuals using these computers, also on a daily basis with an appropriate disk media.*

Q Do you have an offsite storage procedure or program in place for electronic file backups?

A *There is an off-site facility for the backed up digital files generated from CADD/GIS and desktop computers. The facility is located on the installation at a separate site, and is called the Dept. of Information Management.*

Q What primary CADD/GIS application software platforms(s) are currently being utilized at this facility?

A *Software: Bentley's Microstation 5.0 (will soon upgrade to Microstation 95)
Autodesk's AutoCAD Rel. 12*

The plan is 100% dedication to Microstation 95 as the primary software platform for all CADD and GIS activities on the base installation. Currently there is some AutoCAD

usage within the Edgewood area of the base, however, Microstation is designated to be used here as well.

Q What add-on CADD/GIS application software(s) are currently being utilized at this facility and which corresponding primary CADD application software(s) support them?

A	<i>Software: Intergraph MGE</i>	<i>Software: Microstation 5.0</i>
	<i>Software: Intergraph PARCH</i>	<i>Software: Microstation 5.0</i>
	<i>Software: Geo - Media</i>	<i>Software: Microstation 5.0</i>
	<i>Software: FIS</i>	<i>Software: Microstation 5.0</i>
	<i>Software: Vista Map</i>	<i>Software: Vista Map</i>
	<i>Software: Autodesk</i>	<i>Software: AutoCAD 12.0</i>

Q What types of database software are currently being used at this facility, and in what capacity?

A *Software: Oracle version 7.2 - 7.3*
Software: Microsoft Access version 2.0
Software: Dbase III+ IV
Software: IFS-M

Oracle is the primary database for GIS activities, while Access serves as a secondary GIS/FIS database application software interface. There are many segmented and separate Dbase and Access database applications spread out over the base. Most of these serve the needs of FM activities in one way or another, essentially as a standalone application. IFS-M is the work order driven "ultimate" database for the facility operations and management applications.

Q Do you currently use the Internet, if so what for, if not do you plan to do so?

A *Yes, the internet is used to access and obtain information which is then down loaded to the PC environment.*

General Systems - Environmental

(DSHE, IRP, and AEC)

Contact(s): Jacqueline Broome
Computer Specialist
APG - DSHE
Donald Green
Naren Desai
Project Officers
APG-IRP

Date of Interview(s): Tuesday June 24, 1997

Q What type of operating platform(s) support your current CAD/GIS applications technology?

A **DSHE - (JB):** *Currently, there is no CAD capability within DSHE. Two (2) Windows NT servers support their GIS capability.*

A **IRP - (DG):** *No CAD going on within DSHE, with the exception of generation of presentation graphics. About 6-7 years ago, WES put some base maps and rough topography into digital form for APG. For IRP purposes, all the GIS is completed by contractors (mainly General Physics, Dames & Moore, and EarthTech) who are using Arc/Info. IRP prefers the Intergraph MGE system and has had General Physics prepare their remediation GIS packages in this format, as well as convert some old Arc/Info data to MGE. GIS is used to store data regarding wells and sample analytical data, as well as generate cross-sectional views and contamination plume maps. Also, some wetlands and geologic data may be available, depending on the site. GIS systems are maintained by the contractors and there is no remote access to these systems. However, APG requires the following deliverables: an IRDMIS complaint electronic database (which is subsequently placed on the Army's centralized system in Omaha) and a hard copy report. The IRDMIS system will soon be accessible through APG's LAN.*

A **IRP - (ND):** *Naren has on-line access to IRDMIS, but not available to everyone at this time. Often need to manage ecological data, which IRDMIS is not set up to do. Not much flexibility in*

Q What type of network operating system(s) is currently being used to facilitate the computers/CAD workstations at this facility?

A DSHE - (JB): *Most of DSHE's computers are on one of two Novell Local Area Networks (LANs) - Aberdeen Area LAN or Edgewood Area LAN. These two networks are connected by an APG backbone. Currently, only one DSHE building is not on either LAN.*

A IRP - (DG): *Edgewood Area LAN tied to Aberdeen Area LAN. Working on connection to IRDMIS, but IRDMIS has problems with LLP and connection to GIS that have not been resolved.*

Q What kind(s) of computers are currently being used at this site for CAD/GIS, in terms of CPU size capabilities? Also indicate how many of each.

A DSHE - (JB): *The are approximately 120 desktop PCs connected to the LANs. Most of these are 486s, although there are still some 386s and approximately 10 to 15 Pentiums. Also, DSHE has several MACs that are on the network. The fire department has a separate networked system which is also MAC based.*

Q Do the computers at this facility have the capability to access the internet?

A DSHE - (JB): *Everyone in DSHE has internet access from their desktop PC, although not everyone knows how to use it. Everyone is on via a T1 connection.*

Q How is it decided what type of hardware/software is purchased and when?

A DSHE - (JB): *Hardware/software purchases are based on need and funding comes out of the year end budget surplus. Typically, 10 to 20 new computers a year are purchased from these funds.*

Q What type of procedures and or processes are currently being used at this site to maintain a valid electronic file backup, briefly describe?

A DSHE - (JB): *Everything on the network is backed up using an ArcServe system.*

Q Do you have an off-site storage procedure or program in place for electronic file backups?

A DSHE - (JB): *No. All back-ups are located on site.*

- A IRP - (DG/ND):** *Contractors have copies of all restoration projects, and IRDMIS deliverables are sent to Omaha for incorporation into the centralized system.*
- Q** What primary CAD/GIS application software(s) are currently being utilized at this facility?
- A DSHE - (JB):** *No CAD. GIS is usually a VistaMap application. Currently GIS for explosives management and for erosion/sedimentation control are under development.*
- A IRP - (DG):** *No CAD. GIS is Intergraph MGE or Arc/Info applications.*
- Q** What add-on CAD/GIS application software(s) are currently being utilized at this facility and which corresponding primary CAD application software(s) support them?
- A DSHE - (JB):** *None at this time.*
- A IRP - (DG):** *Remediation contractors use GIS solely for producing figures for reports. WES is using GIS to develop a geologic model for APG; software unknown. Some local groundwater modeling has been done for certain sites (GMS - RT3D); there is no overall groundwater model for APG. Some groundwater modeling has also been done in MODFLOW and Transport modeling done in MT3D. In addition, the USGS has been developing a 2-dimensional groundwater transport model.*
- Q** What types of database software are currently being used at this facility, and in what capacity?
- A DSHE - (JB):** *Had been using DBase 3+ software, but are trying to migrate toward Microsoft Access within DSHE. Generally switching to all Microsoft products. Some applications such as TankMan were developed in DBase 3+ and cannot be converted. Also, some Oracle database applications (Overtime Application for GIS - Vista Map) being developed by contractor (Baker).*
- Q** Do you currently use the internet as a vehicle for data exchange, or plan to do so?
- A DSHE - (JB):** *Depends on the individual.*
- Q** Do you have any system related remarks and or concerns that you would like to comment on?
- A DSHE - (JB):** *None. Not aware of any project currently utilizing the Tri-Services Spatial Data Standards (TSSDS).*

A IRP - (DG): *Although not previously familiar with the TSSDS, standardization of data model across the military is viewed as being of great benefit. Would like to see standardized contractual language in place that reflect requirements of the data model for GIS purposes. Definite need for easier conversion from one application to another. Someday the remediation GIS info needs to get into the DPWs system and be accessible by all.*

TSSDS Familiarity - Exposure

(Directorate of Public Works)

Contact: Mr. Gregg Kuester
CADD/GIS Manager
APG - DPW
Ph: (410) 306-1145

Date of Interview: Wednesday, June 25, 1997

Q Have you ever been exposed to the Tri-Service Spatial Data Standards (TSSDS) for GIS or the A/E/C CADD Standards?

A *Yes, both sets of standards.*

If no:

Are you interested in receiving information on Tri-Service Standards? Yes / No

If yes:

Q Do you or does your office have a copy of the standard? Yes / No

A *Yes there are copies of both the Tri-Service Spatial Data Standards (TSSDS) for GIS and the A/E/C CADD Standards, in hard copy and electronic format?*

If no:

Would you like to receive a CD-ROM copy of the TSSDS and A/E/C CADD Standards? Yes / No

Q Have you or anyone working in the area of AEC and GIS at your facility ever used the current versions of these standards? Yes/No

A *Yes, in-house staff personnel working with CADD/GIS applications are obligated to use the standards, and also contractors from the private sector.*

Q Of those working on CADD/GIS projects related to base activities, which group is the most familiar with the TSSDS and the AEC standards.

A *The CADD personnel who are currently involved with the installation GIS at DPW.*

Q Approximately how many times have you utilized the Tri-Service Standards?

A *The standards are used whenever changes are made to CADD/GIS program applications.*

Q What have been your general impressions of the Tri-Service Standards? (TSSDS and AEC)?

A *For the most part the standards are good, we must not forget to use them consistently.*

Q How would you rate the level of difficulty involved in understanding and using the Tri-Service Standards? (TSSDS and AEC)?

A *Initially the Spatial Data Standards were a little difficult to learn and understand, however with each new release the standards are becoming easier to understand and use.*

Q What aspects of the Tri-Service Standards programs if any have you had troubles with? Explain. (TSSDS and AEC)

A *We had difficulty applying usage of the Communication information in our GIS when this particular module of the standards wasn't available*

Q Do you have specific suggestions on how to improve these characteristics of the Tri-Service Standards programs? (TSSDS and AEC)

A *There needs to be a portable method of updating one version of the standards to the next as applied to GIS databases. Currently it is just too expensive to update.*

Q Would you be willing to provide additional specific feedback to the Tri-Service Technology Center regarding these issues?

A *Yes. Any opportunity that would serve to improve the standards would be quite beneficial to the evolution of the software.*

Q Based on your experience with the Tri-Service Standards programs, are there areas which require additional coverage.

A *Within the Tri-Service Facility Management Standards (TSFMS) additional coverage should be developed to include data standards for many of the AEC components which are beginning to be included in the total GIS package.*

Q Did the personnel using the Tri-Service Standards teach themselves or learn by another method?

A *They were self taught, the whole process was a little cumbersome, it could be easier.*

Q Based on your experience with the Tri-Service Standards, which of the following would help the most to ensure that the standards are more uniformly implemented at your facility?: (please rank selections)

- 1.) A training program for GIS specialists
- 2.) Examples of Tri-Service Standard compliant projects similar to in-house applications
- 3.) An implementation manual which conceptually steps an information system specialist through the setup of a new Tri-Service Standard compliant application and a conversion process of an existing non-compliant application to Tri-Service Standards compliant
- 4.) Other:

A *No. 1 Ranked as first best method.*
No. 2 Ranked as second best method.
No. 3 Ranked as third best method.
No. 4 A hands on interactive software driven tutorial would be a great learning tool.

TSSDS Familiarity - Project
(Directorate of Public Works)

Contact: Mr. Gregg Kuester
CADD/GIS Manager
APG - DPW
Ph: (410) 306-1145

Date of Interview: Wednesday, June 25, 1997

Q Has an attempt been made to implement any form of the Tri-Service Standards into a current application use?

A *Yes, the GIS at APG has implemented the TSSDS totally across the garrison.*

Q Does any portion of a current database schema comply with the Tri-Service Standards data structures? Please explain.

A *Yes, The APG GIS database is compliant with Tri-Service Standards.*

Q Likewise, do any of the graphical entities for a current application comply with applicable Tri-Service Standards graphical entities? Please explain.

A *The graphical entities that are contained within the APG GIS are compliant with Tri-Service Standards.*

Q Are there plans to make current database schema Tri-Service Standards compliant?

A *The current installation GIS database schema is Tri-Service Standards compliant.*

Q Are there plans to make current graphical entities Tri-Service Standards compliant?

A *The current installation GIS is Tri-Service Standards compliant in terms of graphical entities.*

Air Emissions/Air Quality Permits and Compliance

Contact: Ms. Amy L. Dean
Environmental Engineer - Air Quality
APG - DSHE
Ph: 1-(410)-278-2138

Date of Interview: Tuesday, June 24, 1997

General

Q What federal or state programs drive air quality issues at this facility? How are these emissions regulated (individually, facility bubble, regional bubble)?

A *There are approximately 1500 potential air emissions sources between the Aberdeen and Edgewood areas. Of these, only 280 are regulated and require permits under Maryland law. A permit is issued for each individual source that qualifies. APG has also recently submitted an application to obtain a federal Title V permit which will require air monitoring at the facility boundary (facility bubble requirement).*

Q What types of permitted air emissions sources are associated with this facility?

A *Types of sources include boilers, paint spray booths, printing press facilities, degreasing facilities, generators, incinerators, asbestos conversion facility, gasoline tank and handling facilities, abrasive blasting booth, remediation systems, and unique military sources (fire safety test enclosure and fire test lab). Depending on the source, the permit may be either a "preconstruction" or an "operating" permit.*

Data Management Systems

Q What types of management systems are currently being used relating to air quality compliance?

A *Because of the large number of permitted sources at APG, it is necessary to actively update the emission inventory and track the permitted sources to be able to renew and discontinue permits as necessary. Currently a program called I-STEPS (Pacific Environmental Services, Inc.) is being used to accomplish this, however it has been necessary to "tweak" the programming to meet their needs. APG started using I-STEPS 2-1/2 to 3 years ago and acquired it through an environmental contractor. It is believed that I-STEPS operates off a FoxPro data file. A Microsoft Access database is used to*

track all permits. Paint usage logs are kept manually and are not used by DSHE for compliance purposes.

Q Are emissions estimates associated with any permitted sources? Would it be beneficial to manage that information similarly to monitoring (compliance assurance) data?

A *Emissions estimates and emission inventories are maintained electronically via I-STEPS. APG also keeps an in-house inventory of Toxic Air Pollutants (TAP) that was developed in conjunction with the HAZMART system (hazardous materials are bar coded and tracked, cradle to grave). Not sure if it would be beneficial to DSHE to incorporate this information into a GIS.*

Q What is the method of data management/record keeping (paper copies, electronic copies, both)? How long are records kept? How long are they required to be kept?

A *Permits are tracked electronically via Microsoft Access database. Paper copies of all permits and compliance records are also maintained. Aware of records dating back as far as 1989 (fuel records), but not sure what the regulatory time requirements are for maintaining records.*

Q What places are paper copies filed? Electronic copies kept? Do you believe that this is an effective management system for the intended purpose?

A *Paper and electronic records are generally maintained within DSHE. Over the last few years, the I-STEPS program and Microsoft Access database has greatly enhanced the way air programs are managed.*

Monitoring and Reporting

Q How are air samples collected? By whom? Is any of the data collected via continuous means (e.g., flow rate)?

A *There is very little sampling associated with the air emissions sources.*

Q Is there a Sampling and Analysis Plan for air emissions? Would it be beneficial to access this information via a GIS?

A *There is no SAP associated with air sampling.*

Q What is the frequency of reporting? With what agencies are reports filed?

A *APG must generate Emissions Certification Reports for every regulated source (frequency not specified). This is a standard Maryland MDE form.*

Violations

Q Have there been compliance problem in general or at any specific sources? Explain what enforcement actions have been implemented (NOV, Administrative Orders, Civil Penalties, Public Citizen Enforcement actions)? Would it be beneficial to manage this type of information via a GIS?

A *No.*

Q What are violation reporting requirements (time frame, resampling, reporting)?

A *Not applicable at this time. Very little sampling associated with permits. Analysis and testing may become more of an issue under upcoming Title V permit. Permits are closely tracked so that they are renewed on a timely basis.*

Q How are violations to be handled? Is this procedure documented?

A *Not applicable.*

Regional Attainment

Q Are there regional air quality monitoring points on site (e.g., for ozone attainment)?

A *Regional attainment is an issue that APG has to deal with, although there are no monitoring points within either the Aberdeen Area or the Edgewood Area. When ozone levels are high, the base is required to provide additional controls and to try to pinch out potential ozone generating sources. The day of the interview (June 24, 1997) happened to be an Ozone Action Day.*

Visions

Q What changes would you like to see implemented in the management of air permitting and compliance information? State systems applications and comment on changes.

A *Relatively satisfied with the way things are managed currently. Of course they are always looking for and open to new ways to improve and automate functions. Does not envision GIS to allow them to do much for compliance that they can't do by other means now, but would allow data to be shared effectively.*

Surface Water Discharge (NPDES) Permits and Compliance
(Industrial, Domestic, Storm Water, and Miscellaneous Discharges)

Contact: Ms. Keisha R. Harris
Environmental Engineer
APG - DSHE
Ph: 1-(410)-278-4529

Date of Interview: Tuesday, June 24, 1997

General

Q Are surface water discharges regulated under a federal or state program?

A *Maryland's Department of the Environment (MDE) NPDES Program. This rolls all wastewater (industrial and sanitary) and storm water discharges into a single permit for the facility.*

Q List the types of sources of wastewater effluents to surface water from this facility.

A *Most discharges are sanitary wastewater or intermittent storm waters. There are numerous labs and other facilities (boilers, etc.) at APG which may discharge more industrial-like wastewater which feed the sanitary treatment plants. Each of these facilities is required by the sanitary plant to provide analytical testing of their wastewater and request permission to discharge to the system on an annual basis. Some labs may be required to provide pretreatment, but not many. If waste waters have been classified as hazardous, then they are collected and subsequently disposed off-site (managed through the hazardous waste division of DSHE).*

Q How are these discharges regulated (individually by outfall, internal monitoring points)?

A *Treatment plants and storm water sources are regulated on an individual outfall basis. The NPDES permit at this facility does not require any internal monitoring points.*

Q Is (are) there on-site treatment plant(s) for waste waters - what type of data collection and management activities take place at these facilities? Would it be beneficial to manage this information via a GIS?

A *APG has two sanitary treatment plants as well as a system of grit chambers/sedimentation pond for storm water. All waste water and storm water are treated and discharged to surface water, there are no alternative discharge methods. Daily operating logs are kept by plant operators - these include flow records, dissolved oxygen readings, BOD/COD measurements and residual chlorine readings as well as*

general observations. Application of GIS to wastewater/storm water management and compliance issues viewed as questionable.

Q Are there any unusual ways of disposing or reusing wastewater (land apply, deep well inject, evaporate, etc.)?

A *No. All non-hazardous wastewater eventually discharge to surface water.*

Data Management Systems

Q What types of management systems are currently being used relating to wastewater and storm water compliance?

A *Mostly hard copy records. Very little record keeping is done electronically. No electronic submittals to MDE.*

Q What is the method of data management/record keeping (paper copies, electronic copies, both)? How long are records kept? How long are they required to be kept?

A *Lab data is received from the sampling contractor in paper form and APG personnel do the necessary calculations by hand. Appropriate information is typed onto the Discharge Monitoring Report (DMR) forms required by MDE. Not sure how far back they have records or how long they are required to keep them.*

Q What places are paper copies filed? Electronic copies kept? Do you believe that this is an effective management system for the intended purpose?

A *Paper copies of the DMRs are kept in Keisha's office and are filed with the state. The management methodology currently being used is meeting the state's requirements, so she is not inclined to change it.*

Monitoring and Reporting

Q How are wastewater/storm water effluent samples collected? By whom? Is any of the data collected via continuous means (e.g., flow rate)?

A *Grab and composite sampling is done in accordance with permit requirements. Outside contractors are used to collect samples and generate data reports. Some information is viewed and recorded on a continuous basis (e.g., flow).*

Q Is there a Sampling and Analysis Plan for wastewater effluents? Would it be beneficial to access this information via a GIS?

A *No SAP. Rely on contractors to perform sampling and analysis using good practices. No need for this to be in a GIS.*

Q What is the frequency of reporting? With what agencies are reports filed?

A *DMRs are being filed quarterly for storm water facilities and monthly for the sanitary plant to MDE. Currently, only hard copies are submitted, but APG anticipates eventual electronic submissions.*

Violations

Q Have there been compliance problem in general or at any specific sources? Explain what enforcement actions have been implemented (NOV, Administrative Orders, Civil Penalties, Public Citizen Enforcement actions)? How are violations to be handled? Is this procedure documented? Would it be beneficial to manage this type of information via a GIS?

A *Not typically any permit excursions. Base is getting smaller, not larger, and hydraulic capacity and loading capacity issues at the treatment plants are less of a concern than ever. Resampling requirements are established in the NPDES permit and would be implemented as necessary. No benefit to managing violations type information in a GIS framework.*

Visions

Q What changes would you like to see implemented in the management of wastewater information? State systems applications and comment on changes.

A *Relatively satisfied with the way things are managed currently. It would be beneficial to be able to access "real time" information (daily monitoring records) electronically from each of the treatment facilities concerning such things as flow, dissolved oxygen content, BOD, COD, and residual chlorine levels so that they could better anticipate problem conditions.*

Building Environmental Hazards - Asbestos

(Directorate of Safety, Health and Environment)

Contact: Mr. John Hayden
Environmental Engineer
APG – DSHE
Ph: 1-(410)-278-????

Date of Interview: Wednesday, June 25, 1997

Q Has an asbestos survey been done for this facility? Were asbestos or asbestos related materials found to be present at this facility?

A *Yes, an asbestos survey was completed in 1989. Decidedly greater than 50% of the survey was considered inadequate and approximately 80% incorrect. The survey is used as a guideline only.*

Q What types of asbestos sources are present?

A *Sources present are basically thermal insulation and building materials which consist of over 20,000 different products.*

Q Are locations of asbestos tracked by any means other than the survey?

A *No. Other than results of survey information kept in hard copy format (written), actual locations are not defined anywhere else. We need an electronic tracking system put in place to be current and consistent with conditions and status of materials.*

Q Have asbestos remediation activities taken place at this facility within the past 10 years?

A *Yes. Renovation and demolition drive abatement and maintenance activities. APG has an onsite staff fully licensed and compliant to conduct remediation activities. Remediation generates approximately 1000 cubic yards of hazardous waste materials per year.*

Q How are asbestos materials stored on-site? What records are available? What do these records contain?

A *Contaminated asbestos containing materials are not allowed to be stored onsite for any extended periods of time. Interim permits are issued for temporary storage of materials for short durations of time, storage capacity is limited to 20 cubic yards of material.*

Q What disposal facilities were used? What testing did they require?

A *Contaminated materials are disposed of at a landfill site located on the APG installation. The land fill meets all governing criteria and laws as dictated by government legislation.*

Q Has NESHAP come into play (e.g., when buildings containing asbestos are torn down)?

A *Yes. The installation is 90% compliant to NESHAP requirements due to the lack of integrity of survey information. APG is fully NESHAP licensed for asbestos remediation.*

Q Is information managed or coordinated by any means? Would it be beneficial to use a GIS to manage this information?

A *GIS would be a great solution, currently we have three people and vast amounts of hard copy records to sort through. All management is currently conducted manually.*

Building Environmental Hazards - Lead Paint

(Directorate of Safety Health and Environment)

Contact: Mr. John Hayden
Environmental Engineer
APG – DSHE
Ph: 1-(410)-278-????

Date of Interview: Wednesday, June 25, 1997

Q Has a lead paint survey been done for this facility? Was lead paint found to be present at this facility?

A *Yes, a lead survey was completed in 1989. Lead paint was found in much of the family housing, child care centers, and food preparation structures. Renovation dictates abatement as applied to these facilities.*

Q What types of lead paint sources are present?

A *The sources are quite extensive, essentially all painted surfaces contain some degree of lead paint coverage.*

Q Are locations of lead paint sources tracked by any means other than the survey?

A *No. Other than results of survey information kept in hard copy format (written), actual locations are not defined anywhere else. We need an electronic tracking system put in place to be current and consistent with conditions and status of materials.*

Q Have lead paint remediation activities taken place at this facility within the past 10 years? Have any interim precautionary measures been taken (warning stickers, safe zones, etc.).

A *Yes. As stated prior, renovation of buildings pretty much sets the standard for remediation activities in terms of abatement and maintenance practices. Basically precautionary measures consists of providing publication education to the tenants as to the dangers and concerns of lead paint within the living environment. There has not been warning stickers or labels posted at any locations.*

Q How are lead paint materials stored on-site? What records are available? What do these records contain?

A *Contaminated lead paint materials are not allowed to be stored onsite, materials are picked up on a daily basis as dictated by abatement and maintenance schedules.*

Q What disposal facilities were used? What testing did they require?

A *Contaminated materials are disposed of at a land fill site located on the APG installation. The land fill meets all governing criteria and laws as dictated by government legislation.*

Q Has NESHAP come into play (e.g., when buildings containing lead paint are torn down)?

A *NESHAP regulations do not apply, MDE rules and regulations are followed, and activities are compliant with the guidelines established.*

Q Is information managed or coordinated by any means? Would it be beneficial to use a GIS to manage this information?

A *GIS would be a great solution, currently we have three people and vast amounts of hard copy records to sort through.*

Building Environmental Hazards

(Indoor Air Quality)

Contact: *(To be identified)*

Date of Interview: *(Telephone interview not yet conducted)*

Indoor Air Hazards

Q Are indoor air quality surveys conducted for buildings at this facility? If yes, what types of contaminants are monitored (e.g., radon, CO, formaldehyde)? What were the results of past survey? What actions have or have not been taken?

A

Q Have any building been diagnosed with “Sick Building Syndrome”? For what reasons and what are the suspected causes?

A

Q Are there microbacteria and/or molds problems associated with duct work in any buildings? Explain.

A

Q Is indoor air quality monitored in any of the facility buildings? Why? How?

A

Q Are complaint records relating to the “health” of the buildings kept? By whom?

A

Q Is duct work cleaned on any kind of regular or informal basis? Is this contracted work?

A

Q Is information managed or coordinated by any means? Would it be beneficial to use a GIS to manage this information?

A

PCBs Management and Disposal

Contact: Mr. Roger Calvert
Environmental Engineer - PCBs
APG - AEC
Ph: 1-(410)-671-2754

Date of Interview: *(Telephone interview not yet conducted)*

General

Q List and describe the types of on-site equipment that may contain PCBs:

_____ Transformers	_____ Heat Transfer Systems
_____ Capacitors (large, high, low)	_____ Air Compressors
_____ Hydraulic Systems	_____ Others (list)

Q Is the equipment totally enclosed? If not have there been PCB related leaks and/or spills?

A

Q Has the equipment been sampled for PCBs? When? Would it be beneficial to manage this type of information with a GIS?

A

Q Is the equipment on site that once contained PCBs and is now rehabilitated/reclassified? Would it be beneficial to manage this type of information with a GIS?

A

Q Are there equipment servicing reports/records kept?

A

Q Are all PCB equipment locations defined and tracked by any means? Are there PCB waste storage areas defined? Are these in compliance with applicable regulations (TSCA - 6" curb, not in flood plain, volume of 2 x largest container or 25% total)?

A

Q Are PCB transformers properly registered with the local fire department?

A

Monitoring

Q Does the facility require an annual inventory (use more than 99.4 lb of PCB)?

A

Q Have PCB wastes been disposed off-site in the last 10 years? Which TSCA permitted facilities were used? Are manifests available and in what forms? Are Certificates of disposal available and in what forms? Would it be beneficial to manage this information in a GIS?

A

Q Does the facility have an SPCC plan applicable to PCBs? Would it be beneficial to incorporate this type of information in a GIS?

A

Reporting

Q To what entities were PCB inventories reported to?

A

Q To what entities were PCB waste disposal reports/records submitted?

A

Record Keeping

Q What is the method of data management/record keeping (paper copies, electronic copies, both)? How long are records kept? How long are they required to be kept?

A

Q What places are paper copies filed? Electronic copies kept? Do you believe that this is an effective management system for the intended purpose?

A

Q What changes would you like to see implemented in the management of PCB related substances information? State systems applications and comment on changes.

A

Regulated Storage Tank Management

(Above Ground Storage Tanks - ASTs)

Contact: Mr. Dan Debonis
Environmental Engineer - Tanks
APG - DSHE
Ph: 1-(410)-278-7977

Date of Interview: Wednesday, June 25, 1997

Data Management Systems

Q Does this facility maintain an electronic inventory of regulated above ground storage tanks?

A *Yes. However, above ground tanks are primarily managed through the DPW and are kept on Lotus Spreadsheet. It is planned to place these on APGs internet site for access by both DSHE and DPW. Even temporary tanks are tracked. It would be possible to track these through DSHE's TankMan database, but they have not done that as it is not their responsibility to maintain this information.*

Q What types of information is kept on these tanks? In what forms?

<input type="checkbox"/> General Condition	<input type="checkbox"/> Clearances (from other structures)
<input type="checkbox"/> General Description	<input type="checkbox"/> Weather Protection/Heating/Cooling
<input type="checkbox"/> As-Built Drawings	<input type="checkbox"/> Spill Prevention Systems
<input type="checkbox"/> Construction Materials/Lining	<input type="checkbox"/> Overfill Prevention Systems
<input checked="" type="checkbox"/> Installation Date	<input type="checkbox"/> Leak Detection Systems
<input type="checkbox"/> Tank Openings	<input type="checkbox"/> Vapor Recovery Systems
<input checked="" type="checkbox"/> Capacity	<input checked="" type="checkbox"/> Service Status
<input type="checkbox"/> Level Indication (real time)	<input type="checkbox"/> Tightness Testing
<input type="checkbox"/> ASTM Ratings	<input type="checkbox"/> Historic Inspection Reports
<input type="checkbox"/> Maintenance Records	<input type="checkbox"/> Elevation Drawings/Info
<input checked="" type="checkbox"/> Other (list)	

The DPW maintains records of tank construction and maintenance. DSHE is only involved in the compliance aspects for tanks. Inspection reports are available as hard copies. When new tanks are installed, an MDE form 231 must be completed and submitted to DSHE so that the tank can be added to the inventory.

Q Is information managed or coordinated by any means? Would it be beneficial to use a GIS to manage this information?

A *AST information is kept electronically and is also available in numerous inspection and testing reports. DSHE is pretty well set up to pull whatever information they need out of a database or spreadsheet as they need it, but have to get up to date copies of DPW's spreadsheets when dealing with ASTs.*

Q Are records kept on materials stored in these tanks? Is there compatibility information kept on materials vs. tank construction? Do any tanks have multiple purposes (store more than one type of liquid over a given period)?

A *Yes. Materials of construction are selected during design based on the fluid to be kept in the tank. Regulated tanks contain one fluid only, otherwise their permits would have to be changed with the state of Maryland.*

Compliance

Q Is there a formal tank inspection schedule? What are the requirements (frequency, etc.)? Who conducts these?

A *ASTs are required to have monthly inspection under Maryland law. APG personnel conduct the inspections, but they are not up to speed because there are over 500 tanks on base and it is a huge effort. Working on their AST inspection procedures to try to come into compliance.*

Q Is there a formal confined space entry program applicable to these tanks? Are records kept on permits issued? By who? What form?

A *APGs Confined Space Entry Program (OSHA requirement) is managed through Safety Division. It is believed that electronic record of issued permits are maintained. Not sure of the types of information that would be included other than dates, names and locations.*

Q Is there a specific SPCC Plan and/or other plans/Manuals (e.g., O&M) that pertain to above ground storage tanks? Would it be beneficial to access these via a GIS?

A *The SPCC plan is a base-wide plan. They are working on having this available in electronic form, but is not sure how far along this effort has progressed. Would be convenient to be able to access this through GIS, but not necessary. There are no O&M manuals for the tanks, although DPW may maintain O&M information on the leak detection, level sensing, and/or vapor recovery systems associated with each tank.*

Regulated Storage Tank Management

(Underground Storage Tanks)

Contact: Mr. Dan Debonis
Environmental Engineer - Tanks
APG - DSHE
Ph: 1-(410)-278-7977

Date of Interview: Wednesday, June 25, 1997

Data Management Systems

Q Does this facility maintain an electronic inventory of regulated below ground storage tanks? What programs are tanks regulated under (e.g., RCRA, OSHA, fire marshal, state environmental, coast guard)?

A *Yes. Underground storage tanks are managed through DSHE and two databases are maintained as current inventory. Information is kept in duplicate via TankMan and on RunUST (developed by WES). This is because TankMan allows them the capability to track information on ASTs in addition to UST (which RunUST can't do), but the report generation capability of RunUST is much more sophisticated than that of TankMan. It is planned to place both databases on APGs internet site for access by both DSHE and DPW.*

Q What types of information is kept on these tanks?

<input type="checkbox"/> General Description	<input checked="" type="checkbox"/> Cathodic Protection
<input type="checkbox"/> As-Built Drawings	<input checked="" type="checkbox"/> Spill Preventions
<input type="checkbox"/> Construction Materials/Lining	<input checked="" type="checkbox"/> Overfill Prevention
<input checked="" type="checkbox"/> Installation Date	<input checked="" type="checkbox"/> Leak Detection
<input type="checkbox"/> Tank Connections	<input checked="" type="checkbox"/> Vapor Recovery Systems
<input checked="" type="checkbox"/> Capacity	<input checked="" type="checkbox"/> Service Status
<input type="checkbox"/> Stick Readings	<input type="checkbox"/> Tightness Testing
<input type="checkbox"/> ASTM Ratings	<input type="checkbox"/> Historic Inspection Reports
<input type="checkbox"/> Maintenance Records	<input type="checkbox"/> Elevation Drawings/Info
<input type="checkbox"/> Other (list)	

The DPW maintains records of tank construction and maintenance. DSHE is only involved in the compliance aspects for tanks. Inspection reports are available as hard copies. When new tanks are installed, an MDE form 231 must be completed and submitted to DSHE so that the tank can be added to the inventory.

- Q** Is information managed or coordinated by any means? Would it be beneficial to use a GIS to manage this type of information?
- A** *UST information is kept electronically and is also available in numerous inspection and testing reports. DSHE is pretty well set up to pull whatever information they need out of either TankMan or RunUST as they need it.*
- Q** Are records kept on materials stored in these tanks? Is there compatibility information kept on materials vs. tank construction? Do any tanks have multiple purposes (store more than one type of liquid over a given period)?
- A** *Yes. Materials of construction are selected during design based on the fluid to be kept in the tank. Regulated tanks contain one fluid only, otherwise their permits would have to be changed with the state of Maryland.*
- Q** Is there a formal tank inspection schedule? What are the requirements (frequency, etc.)? Who conducts these?
- A** *USTs may be regulated under a variety of different programs/agencies including RCRA, OSHA, FDA. Requirements for inspection vary, but generally there is not a lot you can inspect in an underground, functioning tank. UST are generally equipped with leak detection, level sensing, and vapor recovery (as necessary) systems which are used to monitor the tanks integrity and potential environmental problems that may be associated with them.*
- Q** Is there a formal confined space entry program applicable to these tanks? Are records kept on permits issued? By who? What form?
- A** *APGs Confined Space Entry Program (OSHA requirement) is managed through Safety Division. It is believed that electronic record of issued permits are maintained. Not sure of the types of information that would be included other than dates, names and locations.*
- Q** Is there a specific SPCC Plan and/or other plans/Manuals (e.g., O&M) that pertain to above ground storage tanks? Would it be beneficial to access these via a GIS?
- A** *The SPCC plan is a base-wide plan. They are working on having this available in electronic form, but is not sure how far along this effort has progressed. Would be convenient to be able to access this through GIS, but not necessary. There are no O&M manuals for the tanks, although DPW may maintain O&M information on the leak detection, level sensing, and/or vapor recovery systems associated with each tank.*

Solid Waste Storage, Tracking, and Disposal

Contact: Mr. Michael Johnson
Environmental Engineer - Solid Waste
APG - DSHE
Ph: 1-(410)-278-9949

Date of Interview: Tuesday, June 24, 1997

Q What are the various types of non-hazardous solid wastes generated on site?

A *Typically construction/demolition debris(non-asbestos), municipal wastes, old railroad ties, clearing/grubbing debris, and wastewater treatment plant sludge.*

Q How are these wastes regulated (under what programs)?

A *Construction debris, clearing and grubbing debris, old railroad ties etc. are generally unregulated, although there are Maryland state permits relating to operation of the landfills themselves. Medical wastes and possibly some municipal solid wastes may be incinerated and there is an air emissions source permit associated with that operation. Not sure if there are other requirements for municipal wastes and much of that waste is disposed off-site by a contractor.*

Q How and where are non-hazardous solid wastes disposed on-site?

A *APG has two unlined landfills for disposal of construction debris and one incinerator. In addition, APG operates an on-site incinerator for waste burning. Although incinerator ash is generally non-hazardous, it is required to be taken off site to a lined landfill (Scarborough Landfill). All wastes generated by contractors are taken off-site for disposal.*

Q Are waste volumes and quantities tracked via paper trail or in database type system or both? What information is tracked?

A *Both paper and electronic records are kept. Electronic information is kept in Microsoft Excel spreadsheets rather than a database file. It is not accessible by everyone. Recently trained to use Access, and anticipating training on MicroStation, but not yet managing anything using these software packages.*

Q What kind of non-hazardous solid waste information would you like to see managed through a GIS?

A *It would be useful to obtain information such as waste volumes generated during various periods, waste sample analytical results, information regarding recycling of certain materials. It would be beneficial to share this information between DSHE, DPW, ARL, and ATC.*

Hazardous Waste Storage, Tracking and Disposal

Contact: Mr. Andy Murphy
Environmental Engineer - Hazardous Waste
APG - DSHE
Ph: 1-(410)-278-9024

Date of Interview: Wednesday, June 25, 1997

Mr. Murphy refused to speak with Baker personnel due to Baker's involvement in a "Privatization Study" for Aberdeen Proving Ground, being performed under a separate contract. The following questions were developed, but were left unanswered due to the lack of cooperation. He informed interview personnel that hazardous materials are managed through the same Directorate, the Pollution Prevention Planning Office. Mr. Murphy stated he did not have the required authorization to discuss these issues from Mr. Joseph Craton of that office.

Hazardous Wastes

- Q** What types of processes generate hazardous wastes? What are the classifications of these wastes?
- Q** How are these wastes regulated (under what programs)?
- Q** How and where are hazardous wastes stored (satellite storage areas)? Are appropriate area warning placards placed near the storage areas? Are these locations monitored or secured by any means?
- Q** Are appropriate hazard/content labels applied to hazardous waste containers?
- Q** Are waste volumes and quantities tracked via paper trail or in database type system or both? What information is tracked?
- Q** Are these waste disposed on site or off site? Are manifest records kept for hazardous waste transport activities? What other DOT-type requirements must be complied with in shipping?
- Q** Are certificates of disposal issued by the receiving facility? What information is contained on these certificates?
- Q** What kind of hazardous waste information should be managed through a GIS and what should not?

Hazardous Materials Storage, Tracking and Disposal

Contact: (To be identified)

Date of Interview: (Phone interview not yet conducted)

Mr. Murphy refused to speak with Baker personnel due to Baker's involvement in a "Privatization Study" for Aberdeen Proving Ground, being performed under a separate contract. The following questions were developed, but were left unanswered due to the lack of cooperation. He informed interview personnel that hazardous materials are managed through the same Directorate, the Pollution Prevention Planning Office. Mr. Murphy stated he did not have the required authorization to discuss these issues from Mr. Joseph Craton of that office.

Hazardous Materials

- Q** Is this facility subject to SARA 312/313 reporting as required under OSHA 1910? Are past SARA reports kept and in what form(s)? Do you feel it would be beneficial to eventually link SARA reporting through a GIS hazardous materials management system? If so, would SARA reporting be on a chemical or product basis?
- Q** Is there an active inventory of hazardous materials stored on site? Is this an electronic or paper information source? Is it regularly updated? How and how often?
- Q** What types of hazardous materials are stored on site? What types of storage facilities are provided for these materials?
- Q** Are purchasing records maintained for chemicals brought to this facility by outside suppliers? How and where are these records kept? What information is provided (container size, content, hazard classifications, etc.) by the manufacturer(s)?
- Q** Are materials consumption records kept? How and where? Are they regularly updated and by whom?
- Q** Are MSDS records maintained for hazardous materials generated/stored on site? Is this an electronic or paper information source? Is this regularly updated? How and how often? Do these records pertain strictly to chemicals used presently or do they also encompass chemicals that may not be used currently?
- Q** Is there a specific SPCC Plan and/or other plans that pertain to the storage of hazardous materials? Would it be beneficial to access these via a GIS?